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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/856,702	05/25/2001	Thorbjorn Andersson	027650-930	2294

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EXAMINER

SIMONE, CATHERINE A

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 08/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/856,702

Applicant(s)

ANDERSSON ET AL.

Examiner

Catherine Simone

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 22-28 and 31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21, 29 and 30 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 and 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, claims 1-21, 29 and 30 in Paper No. 6 is acknowledged. The traversal is on the grounds that pursuant to 37 C.F.R. 1.475(b)(1) unity of invention exists to claims drawn only to a product and a process. Also, under 37 C.F.R. 1.475(a) unity of invention is present where there is a special technical relationship among the inventions. This is not found persuasive because This is not persuasive because evidence of lack of unity between the two groups is found in EP 0599465 A1 wherein it is found to disclose only the features of instant claim 1. Therefore, the special technical features of the claimed invention are not found to define a contribution over the prior art, and no single general inventive concept exists. Therefore, restriction is appropriate.

Claims 22-28 and 31 stand withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 6.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claims 1-21, 29 and 30** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitations “of at most about $2000 \text{ cm}^3/\text{m}^2$ ” and “by SCAN-P 29-35” in **claim 1** are deemed vague and indefinite. What do you mean by “of at most about”? What does SCAN-P 29-35 stand for? Clarification is requested.

The recitation “the expanded layer has cells, which are substantially closed without connection between the cellular cavities” in **claim 5** is deemed vague and indefinite. What do you mean by “substantially closed without connection between the cellular cavities”? Clarification is requested.

Claim 2 recites the limitation "the outermost layers" in line 2 of claim 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 10 recites the limitation "the mixing ratio" in line 2 of claim 10. There is insufficient antecedent basis for this limitation in the claim.

Regarding **claims 4, 10, 13 and 21**, a broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, **claim 4** recites the

Art Unit: 1772

broad recitation “the expanded layer has at least about 500 cells/mm³”, and the claim also recites “preferably at least about 1000 cells/ mm³” which is the narrower statement of the range/limitation. **Claim 10** recites the broad recitation “the mixing ratio of the first, rigid polymer component to the second, ductile polymer component in the expanded polymer layer is between 1:3 and 3:1”, and the claim also recites “preferably from about 1.25:1 to about 1.5:1” which is the narrower statement of the range/limitation. **Claim 13** recites the broad recitation “preferably polyamide (PA), PEN, EVOH, PAN or copolymers from acrylonitrile and butylene”, and the claim also recites “most preferably PA” which is the narrower statement of the range/limitation. **Claim 21** recites the broad recitation “the paper layers have a surface weight of between about 20g/m² and about 120 g/m²”, and the claim also recites “preferably of between about 30g/m² and about 60 g/m²” which is the narrower statement of the range/limitation, and further the claim recites “most preferably of between about 40g/m² and about 60 g/m²” which is the more narrower statement of the range/limitation.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1-14, 16, 29 and 30** are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson.

Anderson discloses a multilayer structure for packaging comprising an intermediate layer of an expanded polymer (Fig. 11, #110: see col. 4, lines 65-67 and col. 5, line 1) and on each side of the expanded polymer layer, a gas barrier layer (Fig. 11, #20 and #30). However, Anderson fails to disclose the specific resistance/rigidity of at least 100 mN and the material of the gas barrier layer having a specific oxygen gas permeability of at most about $2000 \text{ cm}^3/\text{m}^2$, at 23°C and 0% RH, per 1 μm thickness, during 24 hr. at 1 atm. However, Anderson discloses the calculation of the resistance of the barrier layer (col. 8, lines 66-68), and the oxygen gas permeability (col. 2, lines 2-7). Therefore, one of ordinary skill in the art would have recognized that the resistance/rigidity and the oxygen gas permeability are deemed cause effective variables in the multilayer structures as shown by Anderson.

Thus, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have optimized the value of a cause effective variable such as resistance/rigidity and oxygen gas permeability in Anderson since Anderson discloses the calculation of the resistance of the barrier layer and the oxygen gas permeability, and further, it has been held that to determine the optimum value of a cause effective variable such as resistance/rigidity and the oxygen gas permeability would be through routine experimentation in the absence of a showing of criticality in the claimed ranges. *In re Boesch*, 205 USPQ 215 (CCPA 1980), *In re Woodruff*, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

Regarding **claim 2**, the outermost layers comprise a heat sealable thermoplastic polymer (see col. 15, lines 33-35). Regarding **claim 3**, the expanded polymer layer in its cells and/or open cavities (Fig. 11, #120) is filled with an anaerobic gas (see col. 14, lines 2-4). Regarding **claim 5**, the expanded layer has cells, which appear to be substantially closed without connection between

the cellular cavities. Regarding claim 6, the polymer material in the expanded polymer layer also is a polymer having gas barrier properties (see col. 15, lines 55-60). Regarding **claims 8 and 9**, the expandable polymer material comprises a first rigid component and a second ductile polymer component (see col. 4, lines 63-67 and col. 5, line 1). Regarding **claim 11**, the gas barrier layer comprises polyvinylidene chloride (PVDC) (see col. 4, line 66). Regarding **claim 12**, note a homogeneous layer on each side of the expanded polymer layer comprising a polymer selected from a group as recited in claim 12 (see col. 4, lines 65-67 and col. 5, line 1). Regarding **claim 13**, the gas barrier layers on each side of the expanded polymer layer have a thickness and comprise polyamide (see col. 4, lines 52-54 and lines 65-67). Regarding **claim 16**, the gas barrier layer appears to be directly bonded to the expanded polymer layer (see col. 13, lines 39-42). Regarding **claims 29 and 30**, note dimensionally stable packaging container manufactured from the multilayer structure (see col. 2, lines 29-32).

Regarding **claim 14**, process limitations are given little or no patentable weight. The method of forming the product is not germane to the issue of patentability of the product itself. Further, when the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claim in a product-by-process claim, the burden is on the Applicant to present evidence from which the Examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. *In re Brown*, 459 F.2d 531, 173 USPQ 685 (CCPA 1972); *In re Fessman*, 489 F.2d 742, 180 USPQ 324 (CCPA 1974). This burden is NOT discharged solely because the product was derived from a process not known to the prior art. *In re Fessman*, 489 F.2d 742, 180 USPQ 324 (CCPA 1974).

Furthermore, the determination of patentability for a product-by-process claim is based on the product itself and not on the method of production. If the product in the product-by-process claim is the same or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 946, 966 (Fed. Cir. 1985) and MPEP §2113. In this case, the limitation “by means of co-extrusion of the layers” is a method of production and therefore does not determine the patentability of the product itself.

6. **Claims 15, 17, 18, 20 and 21** rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (5,500,303) in view of Bauer et al. (5,093,164).

Anderson fails to disclose a paper layer and a gas barrier layer comprising polyvinyl alcohol (PVOH) and an ethylene acrylic acid copolymer (EAA). Bauer et al. teaches a paper layer (see col. 2, lines 55-57) and a gas barrier layer comprising polyvinyl alcohol (PVOH) and an ethylene acrylic acid copolymer (EAA) (see col. 4, lines 17-20 and col. 5, line 48) in the art for the purpose of forming a multilayer packaging material having good barrier to transmission of one or more gases.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided a paper layer to each side of Anderson's expanded layer as suggested by Bauer et al. and provided the gas barrier layer in Anderson with polyvinyl alcohol and an ethylene acrylic acid copolymer (EAA) as suggested by Bauer et al. in order to provide a multilayer packaging material having good barrier to transmission of one or more gases.

Regarding **claim 18**, process limitations are given little or no patentable weight. The method of forming the product is not germane to the issue of patentability of the product itself. Further, when the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claim in a product-by-process claim, the burden is on the Applicant to present evidence from which the Examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. *In re Brown*, 459 F.2d 531, 173 USPQ 685 (CCPA 1972); *In re Fessman*, 489 F.2d 742, 180 USPQ 324 (CCPA 1974). This burden is NOT discharged solely because the product was derived from a process not known to the prior art. *In re Fessman*, 489 F.2d 742, 180 USPQ 324 (CCPA 1974).

Furthermore, the determination of patentability for a product-by-process claim is based on the product itself and not on the method of production. If the product in the product-by-process claim is the same or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 946, 966 (Fed. Cir. 1985) and MPEP §2113. In this case, the limitation “the gas barrier polymer has been applied onto the paper layers by means of liquid film coating technology” in **claim 18** is a method of production and therefore does not determine the patentability of the product itself.

7. **Claim 19** is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (5,500,303) in view of Bauer et al. (5,093,164) and further in view of Kato et al. (5,527,622).

Anderson and Bauer et al. fails to disclose the gas barrier polymer material comprising a carboxylic acid group. Kato et al. teaches a gas barrier polymer material comprising a carboxylic acid group (see col. 2, lines 30-40) in the art for the purpose of providing high heat-sealing strength in a packaging laminate.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided the gas barrier polymer layer in Bauer et al. with a carboxylic acid group as suggested by Kato et al. in order to provide high heat-sealing strength in a packaging laminate.


Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents are cited for further teachings of multilayer structures similar to that instantly disclosed.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Catherine Simone whose telephone number is (703) 605-4297. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on (703) 308-4251. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


Catherine Simone
Examiner
Art Unit 1772

August 12, 2002


HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

8/12/02